CALIFORNIA ENERGY COMMISSION

WILLIAM J. KEESE, CHAIRMAN 1516 NINTH STREE T - MS-32 SACRAMENTO, CA 95814-5512 Telephone (916) 654-5000 Telefax (916) 654-4420



August 22, 2001

Mr. Brian Walker Reliant Energy PO Box 286 Houston TX 77001-0266

Re: COLUSA POWER PLANT - DATA REQUESTS

Dear Mr. Walker:

Pursuant to Title 20, California Code of Regulations, section 1716 and section 2025, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

Enclosed are data requests in the area of air quality, alternatives, biological resources, cultural resources, geology, hazardous materials management, land use, noise, power plant reliability and efficiency, socioeconomics, soils and water resources, traffic and transportation, transmission system engineering, and visual resources. Please provide written responses to the enclosed data requests on or before September 11, 2001.

If you are unable to provide the information requested, need additional time to provide the information, or object to providing it, then please send a written notice to both the Committee and me within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please contact me at (916) 654-3929 or at kchew@energy.state.ca.us.

Sincerely,

Kristy Chew Energy Facility Siting Project Manager

Enclosure

cc: Docket (01-AFC-10)

John Grattan, Grattan & Galati

Denise Heick, URS

Technical Area: Air Quality

Author: William Walters and Paula Hemmer

BACKGROUND

In the AFC, the temporary PM_{10} impacts from construction appear to be potentially significant. In addition, the AFC states that repowering of the PG&E Compressor Station for Emissions Reduction Credits (ERCs) would involve construction of at least one new building. No information regarding the expected construction activities, schedule, or resulting emissions from fugitive dust and construction equipment associated with modifications to the PG&E Compressor Station is included in the AFC. Staff needs clarification of the construction emissions and modeling assumptions to be able to assess the Applicant's analysis and demonstrate that there are no significant air quality impacts from project construction.

- 1. It does not appear that the fugitive dust emission calculations properly account for the maximum PM₁₀ emissions potential for the construction on this site. Considering the quantity of earth to be moved at the site, the generic emission factor used is not appropriate. Staff requests the following to ensure that the construction fugitive dust emission calculations are suitable for the site:
 - a. Please recalculate the fugitive PM₁₀ emissions using detailed SCAQMD CEQA Handbook, or AP-42 calculation methods for each fugitive dust source (i.e., wind erosion, dirt pushing, dirt handling, unpaved road travel, etc.).
 - b. Please provide documentation that will support the 90%, or revised, fugitive dust emission control efficiency assumed for each fugitive dust source.
 - c. Section 8 and Appendix G of the AFC are inconsistent regarding the calculation of daily fugitive dust emissions. Please recalculate daily emissions based on the expected hours of each construction activity per day.
- 2. The AFC provides the average number of hours of heavy equipment operations per day but does not include the time of day when the activity would occur. Please provide the daily construction schedule for heavy equipment.
- 3. The construction emission estimates appear to only include construction activities associated with the main power plant facilities. Please provide the following information for modifications to the PG&E Compressor Station:
 - a. the construction activities, equipment requirements, and schedule;
 - b. the fugitive dust and equipment emissions calculations;

- c. monthly emissions estimate from these activities; and
- d. Please provide a revised air dispersion modeling analysis of the construction emissions' impacts using the appropriate emission factors.
- 4. The diesel equipment SO₂ emissions appear to be based on 0.25% (2500 ppm) sulfur fuel (AP-42). This sulfur content is five times the California Motor Vehicle Diesel Standard. Please correct the emissions calculations and modeling results to reflect the use of 0.05% (500 ppm) sulfur diesel.

BACKGROUND

In the AFC, the applicant has concluded that the air quality impacts from project operation will be insignificant. Staff needs clarification of specific technical issues to complete the review of the air quality impact analysis.

- 5. The Applicant states that the commissioning emissions were modeled as one activity with no emission controls. However, due to the variable exhaust conditions for the different commissioning events, staff is uncertain if this approach is guaranteed to provide the most conservative modeling results. To ensure that the commissioning modeling approach is conservative:
 - a. Please describe each of the commissioning events. Please provide fuel consumption data and load conditions for each commissioning event.
 - b. Please provide vendor data and calculations to support the commissioning emissions including stack parameters for each commissioning event.
 - c. Please provide a screening level modeling analysis of each of the commissioning events, using event specific exhaust parameters, to confirm that the modeling results do represent worst-case conditions.
 - d. If this screening analysis indicates that another commissioning event represents worst-case, please remodel the commissioning emissions and present the revised modeling results.
- 6. The annual emissions estimates were calculated assuming 100% load conditions at 60°F. A more reasonable assumption is to provide emissions based on expected operating loads and temperatures for specified periods of time. Please recalculate annual emission estimates using these assumptions.
- 7. Please provide a vendor guarantee for the auxiliary boiler emissions.

- 8. In the AFC, the firewater pump engine has expected operations of 114 hours annually. Please provide the worst case, daily hours of operation and the corresponding 24-hour emissions.
- 9. For the firewater pump engine, SO₂ emissions estimates appear to be based on 0.25% (2500 ppm) sulfur fuel (AP-42). This sulfur content is five times the California Motor Vehicle Diesel Standard. Please correct the emissions calculations and modeling results to reflect the use of 0.05% (500 ppm) sulfur diesel.
- 10. A natural gas analysis is presented in Table 3.4-7 with the source of the data given as Duke/Fluor Daniel. Staff requires a fuel analysis conducted by the supplier and a guarantee of the fuel sulfur content. Please supply a fuel analysis and a fuel sulfur content guarantee from the expected supplier. Also, please provide the maximum expected fuel throughput and any necessary revisions to the SO₂ emission estimates based on the guaranteed fuel sulfur content.

BACKGROUND

The Applicant has indicated that the project meets all Best Available Control Technology Requirements; however, the Applicant is proposing a higher VOC (i.e., precursor organic compounds, reactive organic compounds) concentration than is recommended by CARB Guidelines for Power Plants and than has been recently permitted, as shown in the AFC (Table 8.1-35). Additionally, a recent BACT determination by USEPA (please see attached letter) suggests that for 7F frame turbine combined-cycle plants, USEPA considers BACT for NO_x to be 2.0 ppm (@15% O₂ 1-hour rolling average) and BACT for CO to be 2.0 ppm (@15% O₂ 3-hour rolling average). The Applicant is currently proposing a NO_x emission limit of 2.0 ppm (@15% O₂ 3-hour rolling average). Staff needs additional information to identify whether the project will meet BACT for VOC, NO_x, and CO.

- 11. The proposed BACT levels for VOC are not clear.
 - a. The proposed CPP BACT level, provided on page 8.1-26, is 1.1 ppmvd (@15% O2). However, it is then noted that the CPP exhaust is not expected to exceed 2.5 ppm VOC when duct burners are firing. Please clearly identify VOC BACT emission level.
 - Please identify why this project, as opposed to the projects listed in Table 8.1-35 of the AFC, cannot meet a VOC concentration of 2.0 ppm (@15% O₂ 1-hour rolling average) under all operating conditions as currently designed. Also please identify measures, including revising the maximum

heat duty of the duct burners, that would allow the project to meet the BACT guideline level and the associated costs of such measures.

12. Please identify if the project will be able to meet USEPA's anticipated BACT determination for NO_x and CO emissions. Please identify if any additional control measures will be necessary to meet NO_x and CO emission limits of 2.0 ppm (@15% O₂ 1-hour rolling average) and 2.0 ppm (@15% O₂ 3-hour rolling average), respectively; and please provide the associated costs of any such control measures.

BACKGROUND

The Applicant has indicated that emission reduction credits to offset the project's NO_X and VOC emissions will be obtained by repowering the adjacent PG&E Compressor Station or through purchasing credits through the Colusa County Air Pollution Control District Emissions Reduction Credit (ERC) banking system. In order for staff to finalize the Initial Report for this project the source of all required NO_X and VOC emissions offsets must be identified and approved by the District.

DATA REQUEST

- 13. Please provide a tabular summary of the quantity and ERC generation methods (i.e., existing traditional ERCs purchased, emission fee programs, etc.) for the ERCs that have been, or are being, obtained to offset the project's NO_X and VOC emissions.
- 14. If NO_x and VOC emission reduction credits are to be created by controlling the PG&E compressor station emissions, please provide a copy of any agreements with PG&E, and the schedule for creating these ERCs. Also, please provide the documentation (i.e., source tests, emission calculations) that will be used to determine the quantity of the emission reductions.
- 15. If traditional emission reduction credits are being purchased to offset NO_X and VOC emissions please provide copies of any option contracts or surrendered emission reduction credits.

BACKGROUND

The applicant has indicated that ERC credits for PM₁₀ will be obtained through the local Colusa County banking system or agricultural burning offset program. However, final documentation of the source of the emission credits to be used has not been provided. In order for staff to finalize the Initial Report for this project, the source of all required PM₁₀ emissions offsets must be identified and approved by the District.

DATA REQUEST

- 16. Please provide a tabular summary of the quantity and ERC generation methods (i.e., existing traditional ERCs bought, emission fee programs, etc.) for the ERCs that have been, or are being, obtained to offset the project's PM₁₀ emissions.
- 17. If PM₁₀ ERCs are to be created through an agricultural burning offset program, please provide all program agreements and identify the schedule for the creation of these emission reduction credits. Also, please provide the documentation (i.e., source tests, emission calculations, etc.) that will be used to determine the quantity of the emission reductions.
- 18. If traditional emission reduction credits are being purchased to offset PM₁₀ emissions, please provide copies of any option contracts or surrendered emission reduction credits.
- 19. If using an interpollutant offset strategy please identify:
 - a. The pollutant being used to offset the project's PM₁₀ emissions;
 - b. The interpollutant offset ratio, and the technical analysis that supports the appropriate interpollutant offset ratio;
 - c. The source of the NO_X or SO_2 ERCs;
 - d. Answer all appropriate NO_X ERC data requests listed above in Data Requests 13 through 15 as they pertain to the interpollutant ERCs being used; and
 - e. Documentation from the District to confirm that the interpollutant emission offset ratio is acceptable.

BACKGROUND

Staff must review air quality modeling input and output data files provided in Appendix G and the Air Quality and Public Health Modeling Files CD. There is no description as to what modeling case the individual files correspond. This makes review of the files difficult and time-consuming for Staff.

DATA REQUEST

20. Please provide a brief description and major assumptions associated with each of the modeling runs included in Appendix G and the CD. Also supply descriptions and assumptions for any additional modeling files that are submitted.

BACKGROUND

In order to assess the continuing air quality permitting issues under the timeframe for the assessment of this project, staff requires timely copies of all written communication between the Applicant and the District.

DATA REQUEST

21. Please provide by overnight courier, or means of equivalent speed, all written project correspondence (including e-mails) that has occurred to date between the District or USEPA and the Applicant, and as it occurs between the District or USEPA and Applicant until the final commission decision for this case.

Technical Area: Alternatives

Author: Kristy Chew

BACKGROUND

Staff needs additional information regarding the sites that were considered by the applicant but rejected. Staff needs information to adequately compare and discuss feasible project alternatives. The AFC provides basic information necessary for review and this request is intended to supplement the information contained within the AFC. Staff needs the following information to complete the analysis.

- 22. Please provide a detailed description (including a map, size, elevation, topography) of the two alternative sites that were considered on Replacement Page 9-4.
- 23. Please provide an explanation of why the two alternative sites, discussed on Replacement Page 9-4, were selected as alternatives and why they were rejected.
- 24. Please describe the location and map the transmission routes, water, wastewater, natural gas lines, and any other associated facilities (e.g., lineal facilities) that would be required for the two alternative sites discussed on Replacement Page 9-4.
- 25. If biological information (e.g., a biological survey) was gathered for the two alternative sites, please provide that information.

Technical Area: Biological Resources Author: Melinda Dorin and Natasha Nelson

BACKGROUND

Figure 8.2-3A of the AFC mapped a general area of vernal pool and alkali grassland habitat. There is also some general discussion about the proximity of the transmission towers to the vernal pool complex on page 8.2-19 of the AFC. USFWS guidance on vernal pools states indirect impacts, and even direct impacts, are likely for any project within 250 feet of a vernal pool. Staff does not have enough information to make a final determination on direct or indirect impacts to the vernal pools during the construction and maintenance of the transmission towers.

DATA REQUEST

- 26. Please provide color aerial photos of the vernal pool complex, with the date that the photos were taken. On these photos, indicate the location of the proposed power plant site and transmission line corridor.
- 27. Please provide additional information on where the transmission towers and maintenance roads will be located and whether or not there will be an adequate buffer in order to avoid all direct and indirect impacts. The information should also be submitted as a map.
- 28. Please provide a description of the types of equipment to be used during the construction of the transmission towers and line pulling. Explain what types of impacts the equipment are expected to have on soils, especially during wet periods. If there are other types of equipment that reduce impacts further (e.g., helicopters), then explain why they are not being used.

BACKGROUND

In the AFC, the Applicant assumed presence of three species of vernal pool shrimp (page 8.2-30) because of the lack of protocol surveys. While two vernal shrimps have suitable habitat on site, the pools appear unsuitable for Conservancy fairy shrimp (pages 8.2-11 to 8.2-12). During the site visit with the USFWS, there was discussion about whether the vernal pool habitat that was located at the site would indeed support Conservancy fairy shrimp. Staff was also told that surveys of the vernal pools were completed in July.

DATA REQUEST

29. Please provide more information on suitability of the habitat for the Conservancy fairy shrimp and clarify why the species could or could not be present at the site. Provide any surveys results from July (including a final determination of presence/absence for any special status plants).

BACKGROUND

The Wetland Delineation survey forms (AFC, Appendix H) include the plot ID number, but a map showing where those points were sampled was not included.

DATA REQUEST

30. Please provide maps for Teresa Creek (e.g., including any new surveys done since the AFC) and the project site that show where the wetland determination survey points were sampled, how the wetlands were delineated, and for Teresa Creek a map showing the edge of the wetland.

BACKGROUND

Bridge replacement work is proposed at Teresa Creek. The underside of the bridge was inspected for bats on March 9th and March 26th according to p. 8.2-14 of the AFC. No guano or staining was detected even though there are several species that may potentially occur. Because surveys took place only in spring and bats are active year-around, staff is concerned there may be impacts during demolition of the existing bridge.

DATA REQUEST

31. Provide staff with a proposal on how impacts to bats (federal and state species of concern) will be avoided prior to construction in Teresa Creek.

BACKGROUND

The July 9, 2001 letter sent to the ACOE indicates a temporary bridge will be used while replacement of the permanent bridge is being completed. Culverts will be placed in Teresa Creek as a temporary bridge and fill material will be placed on top of them.

DATA REQUEST

- 32. Provide a project description for the bridge work and information on the culverts' size(s) and any impacts to stream depth and flow rate in Teresa Creek.
- 33. What beneficial uses could the gravel and fill material from the temporary bridge serve, or where will it be disposed of?

BACKGROUND

In the AFC's Table 3.6-3 (pg. 3-45) the construction laydown area is listed as a temporary impact. Reliant and URS at the initial site visit told staff that the construction laydown area will be graded substantially. Staff feels that since the area will be graded, it is a permanent impact.

DATA REQUEST

34. Provide more information on the current surface water drainage and hydrology of the construction lay down area. Describe how grading may change drainage towards the vernal pool complex and provide any mitigation measures that would lessen the impacts.

BACKGROUND

Impacts to giant garter snake due to increased traffic on the road are described in Section 8.2.2.2.3 of the AFC, and Bio-5 was proposed to reduce that impact. Staff is concerned that road kills may still be a significant impact to giant garter snake.

DATA REQUEST

35. Provide information on the feasibility of carpooling/busing employees to the site from Interstate 5 in order to reduce traffic at shift changes or justify why such actions are not feasible. In your discussion, please include information on what the average and peak round trips would be with various carpool options. Also include where an off-site parking area could be located, what type of biological resources are on the proposed site, and how large the area would need to be to accommodate the car pool participants. Or, provide additional measures that could reduce the likelihood of road kills.

BACKGROUND

The construction requirements to protect giant garter snake habitat outlined for Teresa Creek and Delevan / McDermott Road intersection in the AFC's Bio-4 are not equivalent to those found in the USFWS guidelines. In addition, the Applicant has not provided any mitigation for construction impacts to giant garter snakes at the intake on the Tehema-Colusa Canal.

DATA REQUEST

- 36. Please provide a USFWS-compliant avoidance protocol for giant garter snake at Teresa Creek and at the Delevan / McDermott Road intersection.
- 37. Please outline all avoidance and minimization measures (including those found in the USFWS guidelines) that can be implemented during the construction work at the intake on the Tehema-Colusa Canal.

BACKGROUND

Bio-4 states that after construction at Teresa Creek and Delevan / McDermott Road intersection, any fill or debris shall be removed and wherever feasible, disturbed areas

will be restored to pre-project conditions. Staff is concerned that disturbed areas will not be restored to the degree that there will be less then significant impacts.

DATA REQUEST

38. Please provide staff with how the disturbed areas will be revegetated, including the construction laydown area. For Teresa Creek, Tehama-Colusa canal, and the Delevan / McDermott road intersection, discuss if restoration efforts will follow the USFWS guidelines for giant garter snake in order to reduce the impacts to a less than significant level.

BACKGROUND

For mitigation measures to be successful, it is important that there be clear and detailed instructions for responsible individuals to carry out. This is best accomplished through the production of a plan that covers all aspects of the necessary biological mitigation measures. Although the AFC's Bio-12 states a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be prepared prior to construction, staff has typically requested a working draft be submitted prior to certification.

DATA REQUEST

39. Prior to release of the Initial Report, please provide staff with a working draft of the BRMIMP which identifies all sensitive biological resources, identifies plant personnel's roles and responsibilities, estimates timing of construction (and any times when construction is restricted), provides place-markers for anticipated permit conditions, and outlines monitoring objectives and performance standards.

BACKGROUND

There is a proposal by the Applicant to change the diesel engines at the PG&E compressor station to electric motors. The facility description, land disturbance, and conceptual location are discussed in the AFC's Section 3.9.1, Table 3.6-3 and Figure 3.9-2 respectively. Staff is concerned that there may be impacts to species located along the proposed duct bank route.

DATA REQUEST

40. Provide a map and a description of the biological resources along the proposed duct route including the distance of any sensitive species. Describe if the corridor will have temporary or permanent impacts on those species.

BACKGROUND

At the ACOE / Reliant pre-application meeting on July 12, 2001, Matthew Kelley, with the ACOE, stated that Teresa Creek was within the range of Sacramento splittail.

DATA REQUEST

41. Please provide discussion on Sacramento splittail distribution and the likelihood of occurrence in Teresa Creek.

BACKGROUND

In the AFC there are proposed conditions that would require either funding or land purchase in order to mitigate for impacts.

DATA REQUEST

42. Which potential agencies or non-profit organizations have been identified to receive these funds?

BACKGROUND

In the AFC the Applicant specified a leach field will be installed (page 3-15, Appendix A), however staff and USFWS noted Figure 3.4-1 (Plot Plan) includes only a septic tank.

DATA REQUEST

43. Provide a map with the location of the leach field and discuss if any sensitive biological resources will be disturbed during its installation or operation.

BACKGROUND

There are proposed fugitive dust control measures outlined in the AFC Section 8.1.5.10.2.2 (page 8.1-27) and in Appendix A. One of the measures includes the application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces. Staff and the USFWS found no information on where these measures will be used (e.g., where stockpiles may be located) and what the impacts to biological resources might be.

- 44. Provide a description and a map of the areas that may receive fugitive dust control measures in relation to biological resources and waterways.
- 45. For any chemical application used on site, along roadways, or near the transmission lines, please provide the chemical name(s), rating and testing information (LC 50 and LD 50), the estimated maximum amount used, and under which scenarios these chemicals may be used.

BACKGROUND

The AFC includes drawings of the power plant access road (Figures 3.5-2 to 3.5-4), but staff and USFWS could not find a discussion of construction techniques. Roads to the construction laydown area and the transmission towers have no drawings or discussion.

DATA REQUEST

- 46. Please provide specific information of any grading or excavation needed (e.g., depth of cut, amount of fill, source of fill material, location of BMPs such as culverts, if road is bermed) and the types of materials to be used (e.g., use of geotextiles) for the power plant access road.
- 47. Please provide specific information on the roads to the construction laydown area and transmission lines (will they be asphalt, gravel or dirt; will they be raised on a gravel bed; how will surface flows off the road be directed; what BMP's will be in place and where; will any fill be used, and if so what is the source). Provide a discussion of which road segments will be restored after construction and include a description of the expected plant composition, rate, techniques, and timing of revegetation.

BACKGROUND

The expedited process for this AFC means that the USFWS and CDFG consultations need to be completed in an expedited timeframe. Staff is concerned that any delays in the application for these permits could delay our ability to recommend conditions of certification for the project.

48. Please give an update on when application materials to initiate formal consultation for this project will be sent to the USFWS and which agency is acting as your lead agency.

Technical Area: Cultural Resources

Author: Gary Reinoehl and Richard Shepard

BACKGROUND

According to the AFC, two historic resources that could be eligible for the California Register of Historic Resources (CRHR) and National Register of Historic Places (NRHP) as part of larger systems are located within or directly adjacent to the Area of Potential Effects (APE). One of these, the Glenn-Colusa Canal/Glenn-Colusa Irrigation District, will not be impacted by the project, according to the AFC. The other resource, two components of the larger Cottonwood to Vaca-Dixon electrical transmission line system, will be materially impacted by the project. According to the AFC, the portions of the transmission line system within the APE have been evaluated as not significant when considered individually. However, they may have significance as contributing elements to the overall Cottonwood to Vaca-Dixon system, a potential CRHR and NRHP property. Whether these portions of the system represent original construction and retain integrity has not been determined. Additional information on this resource is necessary for staff to complete the analysis.

- 49. Please provide information that details whether the 230 kV transmission lines located within the project APE are part of the original circa early 1920s. Cottonwood to Vaca-Dixon system designed by PG&E engineer Frank Baum and whether any alterations to this portion of the transmission line were subsequently made. An architectural historian that meets the Secretary of the Interior's standards for an architectural historian should complete this investigation.
- 50. Please provide a period of significance of the original Cottonwood to Vaca-Dixon system and whether the 230 kV transmission lines located within the project APE were constructed within the period. An architectural historian that meets the Secretary of the Interior's standards for an architectural historian should complete this investigation.
- 51. Please describe the character-defining attributes of the historic Cottonwood to Vaca-Dixon transmission line system as a potentially eligible CRHR and NRHP property and how these attributes might be evident in the portion of the system located within the project APE. An architectural historian that meets the Secretary of the Interior's standards for an architectural historian should complete this investigation.
- 52. Please discuss how these character-defining attributes, as evident in the portion of the system located within the project APE, will be altered by the proposed interconnection to the power plant switchyard. An architectural historian that meets the Secretary of the Interior's standards for an architectural historian should complete this investigation.

BACKGROUND

Cultural resources that are on lists created by local jurisdictions that could qualify as historical resources and could be impacted by the project need to be considered in the analysis. The AFC indicates that the Colusa County Historical Records Commission was contacted about historic properties in the vicinity of the project, but the Commission's written response was inconclusive. Staff needs the following information to complete the analysis.

DATA REQUEST

- 53. Please provide copies of local lists of important cultural or historic resources designated by a Colusa County ordinance.
- 54. If any of these resources could be impacted by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, then please provide a copy of the requirements used by the local jurisdictions to qualify for the listing.
- 55. If any of the resources could be impacted by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired and it has not been recorded on a DPR 523 form, then please record the cultural resource on the DPR 523 form and provide a copy of the form.
- 56. If any of the resources could be impacted by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, please provide a discussion of the significance of the resources under CEQA Section 15064.5, (a), (3), (A)(B)(C) & (D) and provide staff with a copy of the assessment and the specialist's conclusions regarding significance.

BACKGROUND

In some cases, local historical and archaeological societies have knowledge of cultural resources in an area of a project that may not be available through normal record sources. Staff needs the following information to complete the analysis.

- 57. Please inquire with any local historical and archeological societies that might have knowledge of historical or archeological resources in the area of the project. Please provide copies of the inquiry letters and any responses.
- 58. If any such resources are identified that could be impacted by the project or could have their immediate surroundings altered (change in the integrity of setting) by

this project in such a manner that the significance of the historical resource would be materially impaired and it has not been recorded on a DPR 523 form, then please record the cultural resource on the DPR 523 form and provide a copy of the form.

59. If any of the resources could be impacted by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, please provide a discussion of the significance of the resources under CEQA Section 15064.5, (a), (3), (A)(B)(C) & (D) and provide staff with a copy of the assessment and the specialist's conclusions regarding significance.

BACKGROUND

Although records of consultation concerning cultural resources and DPR 523 forms were appended to the AFC (Appendix I), the archaeological survey report was not appended. Staff needs the following information to complete the analysis.

DATA REQUEST

60. Please provide a copy of the original archaeological survey report.

TECHNICAL AREA: Efficiency Authors: Richard Minetto, PE

BACKGROUND

Staff needs additional information regarding the reliability and efficiency performance for the above-mentioned project. The AFC provided by the applicant provides basic information necessary for review, and this request is intended to supplement the information contained within the AFC.

DATA REQUEST

- 61. Please provide information relevant to the use of the air-cooled condensers related to efficiency. Specifically, in the AFC (Volume 1; Section 3.8.3.6) it is stated "A special design feature of this facility is the air-cooled condenser, which incurs significant capital expenditure and minor performance impacts..." Please provide detailed information on the reduction in efficiency due to the use of the air-cooled condenser, including an estimated percent efficiency drop due to use of this technology.
- 62. Please provide any specific design modifications for dry cooling with this project that increase efficiency over other dry cooling systems.
- 63. Please provide any relevant information related to operation of the proposed dry cooling technology at other power plants including reliability of operation of this design and actual efficiency if available.

BACKGROUND

Staff needs additional information regarding the efficiency performance for the abovementioned project. The AFC provided by the applicant provides basic information necessary for review, and this request is intended to supplement the information contained within the AFC.

DATA REQUEST

64. Please provide an assessment of overall efficiency of the plant with and without duct firing. Please include expected duct firing hours and overall decrease in plant capacity without duct firing.

Technical Area: Geology

Author: Dr. Patrick Pilling, P.E., G.E.

BACKGROUND

The site is underlain by fine grain and clay soils which exhibit high plasticity indices, high in situ moisture contents, and high percentages of fines (i.e., percent passing a U.S. No. 200 sieve). Soils which exhibit such properties can be moderately to severely corrosive to buried steel and concrete.

DATA REQUEST

65. Please provide a discussion and/or evaluation of the site soils' potential to corrode buried steel and concrete.

BACKGROUND

Access to the site will require the construction of a new bridge structure at Teresa Creek. Depending on the design flows in the creek and the foundation system upon which the bridge structure will be supported, scour at the base of the foundations could affect the performance of the structure foundations.

DATA REQUEST

66. Please provide a discussion and/or evaluation of the potential for design flows in Teresa Creek to scour foundation soils.

BACKGROUND

Figure 8.15-5 presents information developed by the California Division of Mines and Geology (CDMG, 1999) regarding peak accelerations with a 10 percent probability of exceedance in 50 years. The peak accelerations referred to by this map are associated with the interface between Soil Profile Type B (Rock) and Type C (Very Dense Soil and Soft Rock) soils, or at the bedrock/soil interface. The information does not necessarily represent a Design Basis Ground Motion (DBGM) as required by Section 1632.2 of the CBC.

DATA REQUEST

67. Please provide the DBGM for this site. This information can be represented by a response spectrum developed in accordance with Section 1632.2 of the CBC.

BACKGROUND

Section 8.15.1.4.5, Mass Wasting and Slope Stability, of the AFC states that the potential for slope instability is negligible. Section 8.15.2.1, Construction, states that

slopes as steep as 2H:1V (horizontal:vertical) will be constructed as a part of this project. As the foundation soils consist of highly plastic clay, the construction of such slopes could induce instability.

DATA REQUEST

68. Please provide a discussion of the methods and/or calculations which were used to assess slope stability at this site.

BACKGROUND

Section 8.15.1.5, Geologic Resources, of the AFC states that no geologic resources exist within 2 miles of the site.

DATA REQUEST

69. Please provide a discussion of the methods used to develop this statement.

Technical Area: Hazardous Materials Management

Author: Alvin Greenberg, Ph.D.

BACKGROUND

Additional information is needed on hazardous materials proposed for use at the Colusa Power Plant Project. To assess the potential for any impacts associated with accidental explosions, fires or releases, it is necessary to know how certain materials are to be stored at the facility and what engineering controls will be used to prevent and mitigate an explosion, fire, or release involving hazardous materials.

DATA REQUEST

70. Table 8.12-1 and Section 8.12.3 of the AFC indicates that 24,000 scf of hydrogen gas will be stored on site. Please provide a description of how the hydrogen gas will be stored and what measures will be taken to prevent and mitigate an explosion or fire.

Technical Area: Land Use Author: Mark R. Hamblin

BACKGROUND

The Colusa Power Plant Project requires the approval of a parcel map by Colusa County to create a 200 acre parcel and a Designated Remainder from an existing 451 acre property. The project also requires a General Plan Amendment on the proposed 200 acre parcel to change the existing General Plan land use designation from Agricultural General (AG) to Industrial (I), and a Change of Zone from Exclusive Agriculture (EA) to Industrial (M) in order to make the project consistent with the County's land use regulations (County General Plan and Zoning Regulations).

The project owner has submitted land use applications consisting of a General Plan Amendment, Change of Zone, and Tentative Parcel Map to the Colusa County Planning & Building Department for processing. The County is proposing to use the CEC's Initial Report as the environmental document for the land use applications.

The Commission shall not certify any facility if it finds the facility does not conform with applicable state, local, or regional standards, ordinances, or laws unless the Commission determines that such facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity (Public Resources §25525). To prevent the need for the Commission to override any applicable state, local, or regional standards, ordinances, or laws, additional information is required.

DATA REQUEST

71. Please provide the CEC a copy of the final map recorded in the Colusa County Recorder's Office and a copy of the adopted General Plan Amendment Resolution and Change of Zone Ordinance adopted by the County Board of Supervisor's and recorded by the Clerk of the Board.

BACKGROUND

AFC page 8.4-9, section 8.4.7.2 *Use Permits*, identifies that the Colusa County Use Permit Ordinance requires the granting of a use permit for the building of a power plant. The use permit for a power plant may be issued in any zone district subject to a finding of necessity for the public health safety, convenience, or welfare by the County (Colusa County Ordinances, Article 6, Section 6.03 C).

DATA REQUEST

72. Please provide the CEC with a letter from the County of Colusa stating that the Colusa Power Plant Project meets the "findings" for the granting of a conditional use permit by the County.

BACKGROUND

The Colusa Power Project (CPP) is to be developed on a 200-acre parcel to be zoned for an industrial use. The actual building footprint for the proposed power plant will involve 27 acres.

The proposed site is outside of an urban growth boundary and is not within a Williamson Act contract (AFC, pg.8.9-4). The property is currently designated "Agriculture-General" (A-G) by the Colusa County General Plan. The property is currently located within the County's "Exclusive Agriculture" Zone. This zone is intended to be applied to areas where agriculture is the natural and desirable primary land use, and in areas in which the protection of agriculture from the encroachment of incompatible uses is essential to the general welfare.

The potential rezoning of upward to 200 acres of land from agricultural use to an industrial use represents a physical change in the environment, specifically the conversion of agricultural land. The AFC states that the potential conversion of 200 acres of grazing land represents "less than 5 percent of an existing 4,800-acre ranch from agricultural use. This represents a loss of approximately 0.1 percent of Colusa County's agricultural land. This is not considered a significant impact" (AFC, pg. 8.4-3). To say that this loss of agricultural land is not a significant impact is premature at this time, since the AFC does not present an agricultural land assessment methodology and analysis to make a conclusion.

The incremental conversion of agricultural land to nonagricultural uses threatens the long-term health of the state's agricultural industry and presents a potential impact under the California Environmental Quality Act (CEQA). The level of significance regarding this project can not be determined since the fundamental issue that was required to be assessed (the impact generated by agricultural land being removed from agricultural use and converted to a nonagricultural use) was not analyzed thoroughly.

The agricultural productivity of the site, water resource availability, surrounding agricultural lands, soil capability, and surrounding protected resource lands (i.e., Williamson Act Contracted Land) are a few of the necessary areas that need to be considered in determining the level of significance for the conversion of agricultural land.

The California Department of Conservation, Office of Land Conservation has prepared a rating system for land resources called the California Agricultural Land Evaluation and Site Assessment (LESA). The use of LESA criteria provides a methodology for assessing the potential environmental impact of state and local projects on agricultural lands and its conversion. LESA provides an approach for rating the relative quality of land resources based upon specific measurable features. The California LESA is composed of six different factors. Two Land Evaluation factors area based upon measures of soil resource quality. Four Site Assessment factors provide measures of a

given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

DATA REQUEST

73. Please complete the California LESA application (can be downloaded from http://www.consrv.ca.gov/dlrp/LESA/LESA.htm) prepared by the California Department of Conservation, Office of Land Conservation and provide it and it's supporting documentation (i.e., maps, soil information, cropping patterns, etc.) to the Energy Commission.

Technical Area: Noise

Author: Hooshang Khosrovani, PhD, PE

BACKGROUND

The applicant states the Cal/OSHA requirements for worker noise exposure (section 8.5.5.c). No noise level estimates are included in the AFC to assess this impact, the report merely states that the plant is designed for conformance with this request. This information is usually developed after the plant start-up, however, high noise level areas need to be identified.

DATA REQUEST

74. Please provide an estimate of in-plant noise levels in areas where worker noise exposure may exceed the Cal/OSHA requirements.

BACKGROUND

The applicant has provided the expected noise levels at various noise sensitive receptors around the plant. However, the low frequency level data have not been identified. This data is needed to assess the impact of low frequency vibration at the receptor points. The C-weighted sound level (dBC) is generally used for assessment of low frequency impact. A level of 70 dBC is considered acceptable for residential locations.

DATA REQUEST

75. Please provide the low frequency noise level estimates at the residential receptor points around the site. Determine if the expected levels have the potential for inducing low frequency vibration in the structures and provide generalized mitigation methods if needed.

TECHNICAL AREA: Reliability **Authors:** Richard Minetto

BACKGROUND

Staff needs additional information regarding the reliability and efficiency performance for the above-mentioned project. The AFC provided by the applicant provides basic information necessary for review, and this request is intended to supplement the information contained within the AFC.

DATA REQUEST

76. Please provide a description of the operation of the combined cycle block for a failure of the HRSG. Include with this description, the method of operating the plant with only the CTs, and include any estimated time constraints for having the CTs on-line for a failure of the HRSG.

Technical Area: Socioeconomics

Author: Dan Gorfain

BACKGROUND

The last paragraph in Section 8.8.1.1.3 attributes the growth rate in construction employment to, among other projects, "a power plant under construction." This power plant is not mentioned in the Cumulative Impacts Section 8.8.4.

DATA REQUEST

77. Please clarify which power plant under construction is referred to and provide information which would help assess whether it has any bearing on the Colusa Power Plant project and whether it should be considered in the cumulative impact analysis in the Staff Assessment.

BACKGROUND

It is always helpful, as a matter of full disclosure, to have a map that shows the location of place names mentioned in the text. For example, the 3rd paragraph in Section 8.8.1.2.1 names several unincorporated towns in Colusa County, none of which are mapped.

DATA REQUEST

78. Please provide a regional map, with a scale at the bottom, that shows the location of places whose names are mentioned in the text.

BACKGROUND

The last paragraph in Section 8.8.1.2.1 discusses the availability of hotel or motel rooms for temporary workers. Table 8.8-14 uses similar figures, but titles them: "Hotel Rooms and Recreational Vehicles." It makes no mention of mobile homes.

DATA REQUEST

79. In order to better assess the availability of temporary housing in the project area, please provide a breakdown of hotel/motel vs. recreational vehicle space availability, as well as the occupancy rate for recreational vehicles. Please provide similar information for mobile homes. If not relevant, please explain. Please map the location of temporary housing which workers may consider using.

BACKGROUND

Section 8.8.1.3 and its subsections discuss the Fire Protection and Emergency Response, Law Enforcement and Medical Facilities and services available to respond to events at the power plant site. It discusses travel distances and personnel, but not response times.

DATA REQUEST

80. In order to evaluate whether the providers of these public services can adequately respond to emergency events at the power plant site during construction and operation, please provide response times for each of these services and describe whether they all fall within acceptable limits. Inadequate response times may lead to an increase in the level of service required.

BACKGROUND

The statements made in the AFC in regard to the application of the IMPLAN model are conclusionary and not sufficiently explained. The reader does not have sufficient information to understand the basis for the coefficients that were selected and the assumptions made.

DATA REQUEST

- 81. Please provide the employment and income multipliers and show calculations for economic impacts. State whether these are Type III IMPLAN multipliers. See Indirect and Induced Impacts from Construction pages 8.8-10 and11 and page 8.8-12.
- 82. The gravity model coefficients are a product of discussion with the applicant and experience with other plants (Operation page 8.8-13); that is, that 80 percent of the production employees would reside within 40 miles of the plant. Please substantiate (i.e., cite sources) to support this statement.

BACKGROUND

The AFC, in footnote 10, states the IMPLAN model assumptions used, but does not explain the rationale for their selection for the Colusa project.

DATA REQUEST

83. Please explain footnote 10's rationale for the IMPLAN model worst-case employment and spending (non-labor costs) assumptions.

BACKGROUND

The AFC presents construction commuter information but does not explain the basis on which the estimates were derived.

DATA REQUEST

84. Further substantiate the statement that 40% of the construction workforce would be weekly commuters, 60 percent daily (Construction pages 8.8-10 and 8.8-13).

Technical Area: Soil and Water Resources

Authors: Kristine Uhlman, Mike Krolak, and Tony Mediati

BACKGROUND

Water supply to the proposed Colusa Power Plant (CPP) is planned to be provided by transfer of approximately 300 acre-feet per year from the Glenn-Colusa Irrigation District (GCID) to the Tehama-Colusa Canal Authority (TCCA), to then be extracted from the TCCA and conveyed to the Site by a new 4-inch diameter, 2,300 foot long buried pipeline. Transfer from the GCID to the TCCA will be accomplished via an 'inter-tie' between the two canals upgradient of the Site.

Water conveyed within the TCCA is subject to unlimited curtailment by the U.S. Bureau of Reclamation in times of high demand. Water conveyed within the GCID is also subject to up to a 25% curtailment by the U.S. Bureau of Reclamation. A conditional will-serve letter has been provided by the GCID citing the need for Bureau of Reclamation approval of the water transfer, as well as other conditions. In times of high demand, the GCID can only assure 75% of the allocated water supply to the Colusa Power Project Site.

Reported historic flow volumes in the Tehama-Colusa Canal at the location closest to the proposed point of diversion (Check 16) for the site range from 0.0 to 633 cubic feet per second (cfs). One cfs is equal to 1.984 acre-feet/day. Months of average monthly low flow in the year 2000 are reported in AFC Table 8.14-2 (page 8.14-18) as follows:

February 0 cfs
December 1 cfs
November 2 cfs

Flow in the remaining months of the year range between 47 cfs (January) to 633 cfs (June). The volume of water needed to be contained within the canal so as to maintain flow at Check 16 is not known. The schedule of water transfer from the GCID to the TCCA needed to provide sufficient flow to Check 16 during low-flow months is not known.

Sustainable and dependable water supply during periods of high demand can only be assured by the GCID to an amount of 75% of the planned supply due to curtailment that may be imposed by the U.S. Bureau of Reclamation. In addition, the water is to be conveyed within the Tehama-Colusa Canal, which is subject to unlimited curtailment.

DATA REQUESTS

85. Please identify other diversions that exist along the Tehama-Colusa Canal between the location where Glenn-Colusa Canal water is to be transferred to the TCCA, and Check 16. Are there other water consumers between the point of

diversion and Check 16 that are receiving water not subject to unlimited curtailment?

- 86. In periods of low and/or no flow, what volume of water must be contained within the Tehama-Colusa Canal to assure sufficient water is available for diversion to the Site?
- 87. Please provide a more extensive evaluation of flow in the Tehama-Colusa Canal. Over the period of record, how often was there no water within the canal, such as reported for February of 2000? How often and what volume of water has been curtailed by the U.S. Bureau of Reclamation?
- 88. In the event that the planned water source is curtailed or otherwise experiences insufficient flows for a prolonged period of time, will the project utilize a backup supply source (outside of the proposed backup/firewater storage tank) or simply cease operation until the GCID water becomes available again?

BACKGROUND

The AFC states that "Based on conversations with local water agencies and well drillers, the area surrounding the site has not historically produced ground water...due to the availability of surface water...(AFC §8.13.1.1). In addition, the AFC states that, "Because of the uncertainty about whether a reliable source of ground water is available to meet the proposed project's water supply needs, use of ground water as the sole or primary water supply source was determined to be less reliable than a surface water source." (AFC §8.14.1.2.5). Appendix O of the AFC reports on the limited ground water investigation which suggested that a source of water does exist onsite, with a calculated capacity approaching 200 gpm. Independent review of the data provided in Appendix O has generated the following observations:

- Test borings were constructed by mud-rotary method where mud (typically bentonite clay) is injected into the drilling fluid.
- The test well was constructed with a very limiting screen length of 20 feet, allowing for formation water to enter the 240-foot well only through openings at the bottom of the well.
- The location of the pump (180 feet below ground surface (bgs)) in relation to the screen (215 to 235 feet bgs) suggested that insufficient flow velocity was maintained across the well screen to remove the drilling mud from the borehole. The pumping rate was also apparently insufficient to remove drilling mud from the boring.
- Table O-2 reported on water quality from the test well. Values reported for turbidity, Total Suspended Solids, and Total Dissolved Solids suggest that drilling mud remained within the water. An adequately constructed and

developed well in a similar geologic setting should be able to produce water of significantly lower turbidity. Turbidity values of 5 NTUs and lower are possible.

 Problems in maintaining constant flow rate (a necessary and important component of well testing) were reported during the well test.

Adequate well development prior to testing is necessary to purge all drilling fluids from the borehole, otherwise measured well response will be less than the aquifer is capable of producing. An independent review of Appendix O suggests that the well testing was insufficient to fully characterize the water-bearing capacity of the site aquifer. This interpretation is supported by other information provided in the AFC, such as Table 8.14-1 which reports estimated ground water storage capacity and yields for the region. In addition, the AFC documents that the Maxwell Public Utility District provides water from three wells capable of yielding 500 to 1,000 gpm near the site (AFC §8.14.1.1).

The results of the Site ground water investigation suggest that a source of water exists onsite with a capacity approaching 200 gpm. Assuming that a properly designed production well will yield more than the 200 gpm measured from the pump test, an onsite source of water may buffer the project's susceptibility to water curtailments and shortages more than the available surface water sources.

- 89. Knowing that existing test data is likely biased towards generating lower than actual aquifer capacity for yielding water, please calculate what the area of influence (drawdown cone) would be around test well #3 if pumped at 200 gpm. Please provide an estimated direction of ground water flow from the leach field across the site. If a site water supply well were to be constructed, how might that change ground water flow direction in relation to the leach field?
- 90. What is the literature-reported value for recharge to ground water as a percentage of annual precipitation? What surface land area would be necessary to allow for 300 acre-feet/year of recharge to the ground water? How does this area compare to the area of well influence?
- 91. The chemical analysis of water pumped from boring #3 indicated that ground water meets drinking water standards with the exception of turbidity and total dissolved solids (TDS). Assuming that drilling mud contaminated the water sample, resulting in elevated turbidity and TDS, would the ground water quality be sufficient to meet the power plant's needs?
- 92. In addition to the Maxwell Public Utility District (MPUD), what other facilities or municipalities obtain water supply from ground water? Does MPUD maintain records of historic ground water elevations and long-term water table drawdown due to their water supply extraction? If so, please provide the historic data for the period of record.

93. Please provide the as-built construction diagram and graphical log of the Test well. After completion, were the test borings and test well sealed and abandoned in place?

BACKGROUND

The AFC supplemental information states that hydrologic data is not available for Hunter's Creek, but the AFC supplemental information suggests flow in Hunter's Creek is greater than that reported for both Stone Corral Creek and the South Fork of Willow Creek (New Table 8.14-3a).

DATA REQUESTS

- 94. At what location downstream from the site does Hunter's Creek change from ephemeral to perennial?
- 95. The AFC states that storm water runoff from the Site will be collected and conveyed to the 2.2 acre-foot sedimentation detention basin. Will the detention basin over-flow discharge to Hunter's Creek?
- 96. Please map the proposed location and footprint of the leach field serving the septic system in relation to Hunter's Creek, and any swales or drainage features that tie to Hunter's Creek from the leach field area.
- 97. Please provide a water quality analysis of Hunter's Creek downstream of the project near the location where it becomes perennial and identify any downstream uses of the creek water including any uses associated with either the Sacramento National Wildlife Refuge or the Delevan National Wildlife Refuge.

BACKGROUND

Wash water resulting from periodic cleaning of the compressors and heat recovery steam generators may generate flows up to 52,000 gallons of wash and chemical cleaning water per year (the equivalent of 142 gallons/day) containing elevated concentrations of heavy metals (AFC §8.13.2.1.2). This water will be disposed of at a liquid waste disposal facility.

- 98. What heavy metals are anticipated to be in this waste stream?
- 99. Where will this waste stream be stored and managed prior to off-site transport and disposal?

BACKGROUND

Non-hazardous liquid wastes are proposed to be discharged during construction to the storm water retention basin or evaporation pond (AFC §8.13.2.1.1).

DATA REQUESTS

- 100. If an evaporation pond is to be used, where is the proposed location?
- 101. What is the anticipated volume of water to be managed and at what rate would this waste stream evaporate during the construction cycle?
- 102. Are dewatering activities anticipated to be necessary during construction? If so, how will the water be managed/disposed of?

BACKGROUND

The stormwater detention pond will be designed to accommodate the peak runoff of the pre-development condition resulting from a 10-year, 24-hour storm event. The AFC states that "it is estimated that the basin will discharge approximately 1.4 acre-feet based on a 10-year, 24-hour storm event" (AFC p. 3-16).

DATA REQUESTS

- 103. Provide calculations that determine the volume of runoff from these storm events. Provide calculations that confirm that the basin will not discharge sediment during construction.
- 104. Please provide a figure that distinguishes areas of the project where runoff will be routed to the zero liquid discharge system, and areas of the project where runoff will be routed to the stormwater detention pond.

BACKGROUND

Accelerated wind and water-induced erosion may result from earthmoving activities associated with construction of the proposed project. All soils are highly susceptible to erosion upon removal of any vegetative, asphalt or gravel cover, and the commencement of earthmoving activities.

DATA REQUESTS

105. Please provide conceptual amounts of cut versus fill which will enable an estimate of excess fill to be used as stockpile storage. Provide estimated maximum cut and fill slope heights and ratios.

106. Please provide any specialized erosion controls to be implemented during construction of the water supply pipeline tie-in to the Tehama-Colusa Canal, such as water bars, due to the steep slope at that point.

Technical Area: Traffic and Transportation

Author: David Flores

BACKGROUND

AFC Page 8.10-3, the first paragraph states "that the railroad is currently in use. It would be used to transport construction materials and could also be used to transport operating materials for the project in the future."

DATA REQUEST

- 107. To determine the effects and impact that the transportation of heavy equipment will have on the local and state roadways, and traffic flow, please provide the following information:
 - a. The rail depot location that the project expects to use.
 - b. The roadways to be used to transport the equipment to the facility.
 - c. The monthly schedule for the delivery of heavy equipment.

BACKGROUND

We would like to fully understand all aspects of the proposed project affecting the use of land, including required easements or other agreements affecting private property.

- 108. Please provide the following information:
 - a. The AFC (Section 8.10.1.1.2) indicates that a portion of Dirks Road is a paved private roadway. The proposed access to the project site is within this existing roadway easement which crosses two private properties. Please describe this easement.
 - b. Discuss what agreements have been secured with the owners of the easements, or whether a new or expanded easement is required.
 - c. Discuss whether this roadway easement will meet the fire district's requirement as an all weather roadway.

TECHNICAL AREA: Transmission System Engineering

Authors: Richard Minetto and Laiping Ng

BACKGROUND

Staff needs a complete interconnection study to analyze the reliability implications and confident identification of any downstream facilities necessary for the interconnection of the Colusa Power Plant Project to the PG&E system. Such interconnection should comply with North American Electric Reliability Council (NERC) Planning Standards, Western Systems Coordinating Council (WSCC) Reliability Criteria, and the California Independent System Operator (Cal-ISO) Reliability Criteria.

DATA REQUEST

109. Please provide the PG&E Final System Impact Study for use in identifying any system impacts related to the Colusa Power Plant Project. If the Final System Impact Study is not available, please provide a schedule for completing the study and submitting it to staff.

Technical Area: Visual Resources

Author: Bill Kanemoto

BACKGROUND

According to the AFC facility description, 24 new transmission towers would be located between the CPP switchyard and the existing PG&E transmission lines.

DATA REQUEST

110. Please submit a site plan with contour lines depicting the approximate locations of the 24 proposed transmission towers.

BACKGROUND

Proposed detention/sediment basins could have visual effects due to ground disturbance of large areas, and to elevated containment berms. However, the boundaries of detention and/or sediment basins in the project layout are not clear from the facility description and site plan of the AFC. Similarly, the limits of other permanent ground disturbance (areas that will not be restored after construction) are not clearly described in the facility description of the AFC.

DATA REQUEST

- 111. Please provide the following on a site plan with contour lines:
 - a. The location and boundaries of sediment/detention basins, including locations and heights of proposed berms and
 - b. Depict and identify all areas of proposed permanent ground disturbance.

BACKGROUND

The descriptions of proposed night lighting in the AFC facility description and visual resources discussion are not adequate to evaluate potential impacts.

- 112. Please provide a more detailed description of proposed night lighting, including lighting of parking and maintenance areas, and of large structures including the exhaust stacks and cooling condenser.
- 113. Please specify whether the FAA has been consulted regarding lighting requirements of the project and provide the FAA lighting requirements that would apply to this facility, if any.

BACKGROUND

There appears to be a discrepancy between the representation of the control room/administration building (which appears to be partially two-stories in height as portrayed in the visual simulations), and the elevations provided in the facility description, which do not appear to show this building (Figures 3.4-2 and 3.4-3).

DATA REQUEST

114. Please resolve this and any other discrepancy between the simulations and the facility description.

BACKGROUND

During a pre-filing site visit to establish visual Key Observation Points, CEC staff recommended that the power plant site be located at the lowest point in the immediate site vicinity, to take maximum advantage of the screening opportunity provided by local topography, particularly a hill immediately west of the existing PG&E compressor station. However, the proposed power plant site shown in the AFC is located approximately 500 to 1,000 feet northeast of the lowest point in the immediate vicinity, and would occupy part of the hill that would otherwise provide visual screening. The alternative location to the southwest would be superior from a visual standpoint because the power plant would be less visually prominent and less visible to the public. Also, the proposed location would require much more cut and fill than the lower, flatter location.

DATA REQUEST

115. Please discuss the feasibility, advantages, and disadvantages of locating the power plant site at a lower elevation, approximately 500 to 1,000 feet southwest of the proposed location, to maximize the screening potential of local topography. Include any relevant engineering, drainage, cost, or other factors.

Technical Area: Visual Resources - Plume

Author: William Walters

BACKGROUND

Staff has concerns that the moisture content units provided for the HRSG exhaust in the Applicant's Supplement to the AFC are not correct. Based on a review of several similar projects the moisture content units provided appear to be volume percent, rather than the stated weight percent. Staff seeks confirmation of the moisture content units provided by the Applicant.

DATA REQUEST

116. Please identify if the moisture content units provided in the Supplement to the AFC are weight percent as noted, or if the values provided are actually volume percent.

BACKGROUND

The Applicant, in their supplement to the AFC modeled the visible Heat Recovery Steam Generator (HRSG) exhaust plumes using the CSVP model. In order to assess the Applicant's modeling analysis results and to complete a separate modeling analysis for comparison with the Applicant's modeling analysis results, staff needs additional HRSG operating information.

DATA REQUEST

117. The HRSG exhaust characteristics provided by the Applicant only provide four specific operating case/ambient condition scenarios. These four scenarios do not specifically reference the ambient relative humidity. In order for staff to more accurately model the visible plume potential for the HRSG exhausts please provide HRSG exhaust data to complete the following tables.

Ambient Condition	Moisture Content (% by weight)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)	Molecular Weight (lbs/lb-mole)
Full load with Duct Burner On and Evaporative Cooler (if appropriate) On				
20°F, 90% RH				
20°F, 60% RH				
20°F, 30% RH				
40°F, 90% RH				
40°F, 60% RH				

40°F, 30% RH		
60°F, 90% RH		
60°F, 60% RH		
60°F, 30% RH		
80°F, 90% RH		
80°F, 60% RH		
80°F, 30% RH		

Please note that staff intends to model the HRSG exhausts using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file(s) used to perform the modeling. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will be used to more accurately represent the HRSG exhaust conditions.

118. Please identify the minimum temperature/relative humidity conditions when the evaporative cooler (i.e., fogger) will be used.

BACKGROUND

In addition to the HRSG, Staff will also model the plume frequency and dimensions of the auxiliary boiler. In order for staff to complete the plume modeling analysis of the auxiliary boiler additional operating data is needed.

DATA REQUEST

119. Please provide the following exhaust parameters for the auxiliary boiler at its anticipated normal operating load.

Ambient Condition	Moisture Content (% by weight)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)	Molecular Weight (lbs/lb-mole)
20°F, 90% RH				
20°F, 60% RH				
20°F, 30% RH				
40°F, 90% RH				
40°F, 60% RH				
40°F, 30% RH				
60°F, 90% RH				

60°F, 60% RH		
60°F, 30% RH		
80°F, 90% RH		
80°F, 60% RH		
80°F, 30% RH		

Please note that staff intends to model the auxiliary boiler exhaust using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file(s) used to perform the modeling. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will be used to more accurately represent the auxiliary boiler exhaust conditions.

Technical Area: Public Health Author: Alvin Greenberg, Ph.D.

BACKGROUND

Onsite diesel power construction equipment will emit diesel particulate matter which is classified as a Toxic Air Contaminant and a carcinogen.

DATA REQUEST

120. Please provide a worst-case risk assessment (cancer and non-cancer impacts) for diesel particulate emissions from construction equipment, and include the location of the point of maximum impact, the impact at the nearest facility fence line, and the impact at the nearest residence.